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Conference Abstract

What Data Do We Need, and What Data Do We Have for Monitoring Global Biodiversity?

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Abstract

Globally we are beginning to realise the need for environmental policies to be built on evidence. For example, the recent Kunming- Montreal Global Biodiversity Framework (GBF) is underpinned by a monitoring framework built on a selection of indicators designed to track progress towards GBF targets. Yet, any indicator is only as good as the data used to develop it, thus understanding the limitations and assumptions in environmental data that provides the basis for indicators is crucial.

The exponential growth in the availability of diverse types of ecological data has seemingly changed the problem for many ecologists trying to understand the natural world from having insufficient data to approach many ecological questions, to one of how to usefully analyse ever growing volumes of data. Yet despite this huge volume of data, biases within the data require caution to ensure their sensible use, as biases may shape the outcomes of analysis and potentially misrepresent true ecological patterns. These shortcomings have fundamental implications for the use of this data to identify trends and patterns in biodiversity, and thus for our ability to provide what is needed for science-driven policy. Here I discuss data needs, and limitations, then provide recommendations to guide sensible and effective use and interpretation of data. I discuss frameworks and standard pipelines to enable more effective use of data, and better approaches for the generation of further data to aid the development of effective conservation, policy and management. I also discuss examples of science-driven indicators currently used within policy, such as ecological conservation redlines to provide case-studies of how science

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can directly and effectively be used within spatial prioritisation and management. Finally, I highlight priorities ahead for both research, and biodiversity targets, as well as discussing short and longterm solutions as we fill knowledge gaps and develop more accurate model approaches.

Keywords

indicators, biodiversity targets, data gaps, data standards, environmental policy

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Conflicts of interest

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